

## 7. Keith

**Program Name:** Keith.java

**Input File:** keith.dat

Keith has been talking about his physics class and how they are learning about velocity and acceleration. Anything that is moving, whether slowly or quickly, would have a velocity. That velocity might actually change over time like an automobile traveling at different speeds and in different directions. Technically, in physics, a velocity involves both speed and direction but let's ignore the direction for now and just focus on the speed as if it was constant and movement was in a straight line. The average speed is just the ratio between the distance and the period of time spent moving. Here are some examples:

- A 247 mile automobile trip between two cities that takes 3.5 hours would have an average speed of  
 $247 \text{ miles} / 3.5 \text{ hours} = 70.57 \text{ miles/hour}$
- Earth is on average about 92,960,000 miles from the sun and light from the sun takes about 8.3 minutes to reach the earth so the average speed of travel for the light is  
 $92,960,000 \text{ miles} / 8.3 \text{ minutes} = 11,200,000.00 \text{ miles/hour}$
- A jogger that completes a 10K (10000 meters) course in 73 minutes would have an average speed of  
 $10000 \text{ meters} / 73 \text{ minutes} = 136.99 \text{ meters / minute}$
- A Texas downpour that produces 3.7 inches of rain in 25 minutes is raining at the rate or speed of  
 $3.7 \text{ inches} / 25 \text{ minutes} = 0.15 \text{ inches / minute}$

Keith had a homework assignment in which each problem provided a distance and a time period, most with different units of measure. He knows you are part of a programming team and thought you could write a program to perform the computations so he could check his work. There are no unit conversions so it is just one number divided by another number and Keith just wants the raw speed without any units. However, you decided to add an extra twist and also identify the smallest and largest speeds of those provided.

Write a program to produce a list of speeds and identify the smallest and largest values.

**Input:** An unknown number of pairs of distance and time values with no units of measure. Each pair will be on a separate line and be separated by whitespace. Both will be non-zero and positive and may have decimal points. The maximum distance will be 99,999,999.99 and the maximum time will be 999,999.99.

**Output:** A list of speeds, one per line, with two decimal places of accuracy. Followed by two additional lines containing the smallest and largest values formatted as shown below.

**Sample input:**

```
247 3.5
92960000 8.3
10000 73
3.7 25
60910004.97 749.19741
```

**Sample output:**

```
70.57
11200000.00
136.99
0.15
81300.34
Min = 0.15
Max = 11200000.00
```